Link: 1990 Highlights

An Information Partnership in
British Columbia's Education System

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Province of
British Columbia

Produced in cooperation with
the Ministry of Education
and
The Ministry of Advanced Education,
Training and Technology

The LINK File is an amalgamation of student information provided by the Ministry of Education and British Columbia's public universities, colleges and institutes.

The File was created in 1987 as an information partnership aimed at fostering planning in the education system and research on:

- *the flow of students into and within the post-secondary education system*
- *the relationship between academic performance at the secondary and post-secondary levels*

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CONTENTS

INTRODUCTION 1

HIGHLIGHTS 3

SIGNIFICANT TRENDS 4

Entering the Post-Secondary System 4

1. Are more graduates making the transition directly out of high school? 4
2. Are post-secondary enrolments generally increasing? 5
3. What factors are affecting these trends? 6
4. Are there large differences among regions of the province? 8
5. Are female high school graduates more likely than males to enter the post-secondary education system? 10
6. How much do gender and high school grades influence the type of programs in which students enrol? 10

Movement Within the Post-Secondary System 12

1. How much movement is there among post-secondary institutions? 12
2. Has the flow of students between the colleges and the universities changed over the past few years? 13

Tracking Academic Performance Through University 14

1. On the whole, are high school grades good predictors of academic success in university? 14
2. How do students who transfer to university from a college perform in comparison to direct entries from secondary school? 15
3. How many students complete their university degrees? 16
4. Are there trends in the types of degrees universities are awarding? 16

APPENDIX 1: Project Background 17

APPENDIX 2: Available 1990 B.C. Research Reports 19

HIGHLIGHTS

- ***Proportionally, more students are going directly from high school into post-secondary institutions than ever before.***

- ***In total, post-secondary enrolments are growing rapidly, fueled by higher persistence and delayed entry rates, plus the rising number of students taking courses at more than one institution simultaneously.***

- ***Colleges and technical institutes are now drawing more students out of high school than are universities.***

- ***There are significant differences among regions of the province in the type of post-secondary preparation high school students are receiving and in the type of advanced education they seek.***

- ***The patterns of student flow seen in the past few years are changing, primarily due to the larger role played by colleges.***
  - *There is a great deal of movement within the post-secondary system, particularly from and to the colleges.*
  - *Reverse transfers, from universities to colleges, are becoming much more common.*

- ***Gender has no effect on post-secondary transition rates or university performance, but does influence the kind of programs to which students are attracted.***

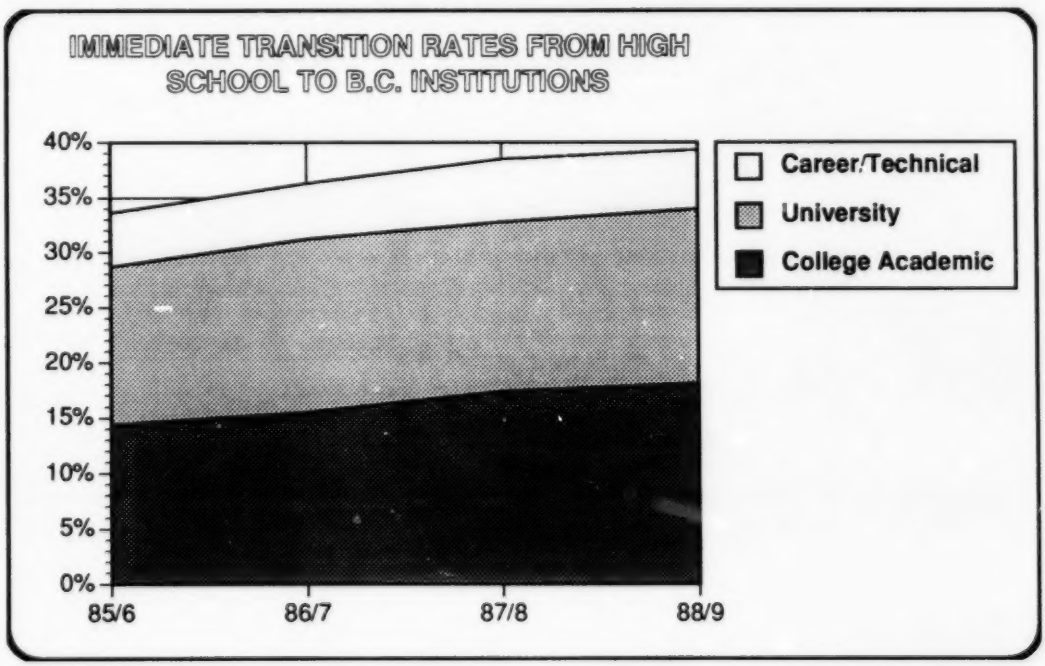
- ***To some extent, Grade 12 marks are predictive of university performance. The difference between the university performance of students who transfer from colleges and those who enter directly from high school is largely a reflection of the difference between their Grade 12 levels of achievement.***

SIGNIFICANT TRENDS

Entering the Post-Secondary System

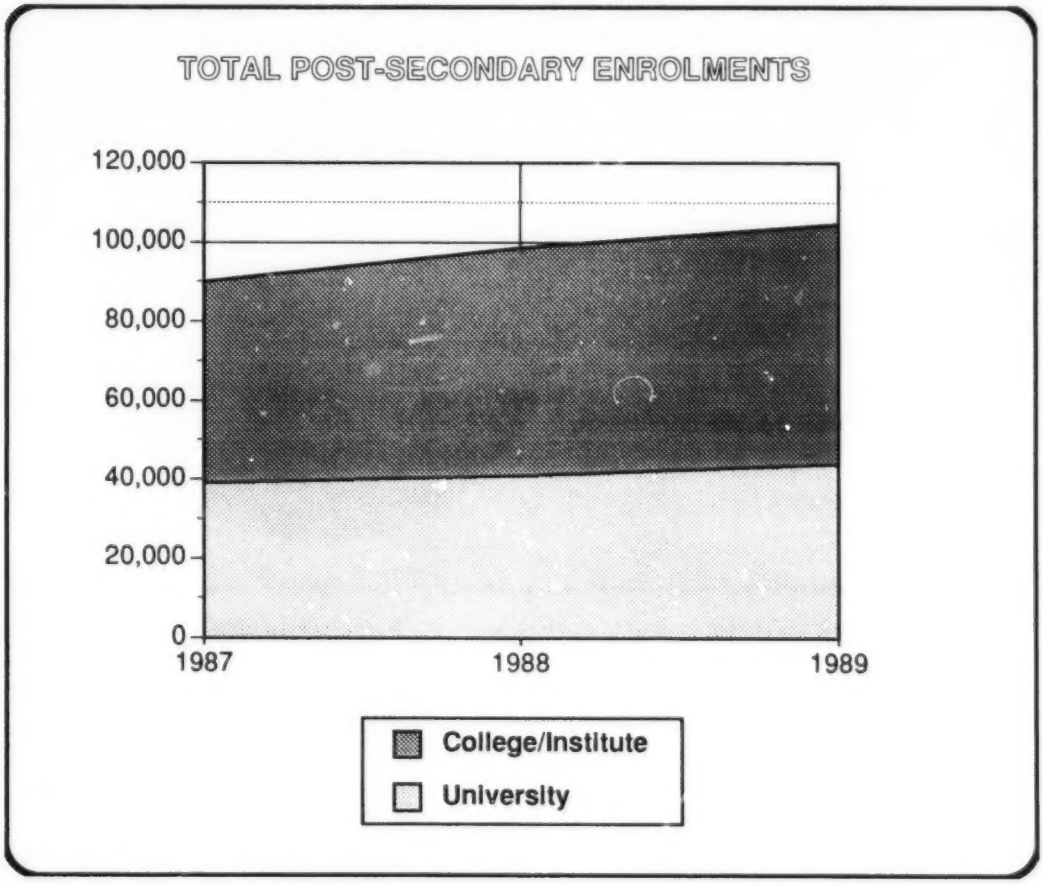
1. **Are more graduates making the transition directly out of high school?**

   - The **overall proportion** of graduates that proceed directly from high school to a post-secondary institution is increasing. In terms of relative growth, the college academic programs show the steepest rise from 1986 to 1989; the universities show a less steady, smaller growth; and career/technical programs the smallest increase.
   - Despite a decline in the total number of graduates in 1989 from the previous year, the **number** entering both universities and colleges still increased slightly.
   - Altogether, about 40% of graduates now enter advanced education **immediately** after secondary school . Of these, 46% enter college academic programs (4,839 in 1989), 40% go to university (4,241), and 14% enrol in career/technical programs (1,404). *(Out-of-province enrolments are not counted in these figures; this is an especially relevant consideration for eastern regions of the province, from where a large proportion of graduates traditionally enrol in post-secondary institutions in Alberta.)*
   - B.C. colleges now draw more students directly out of high school than do B.C universities.



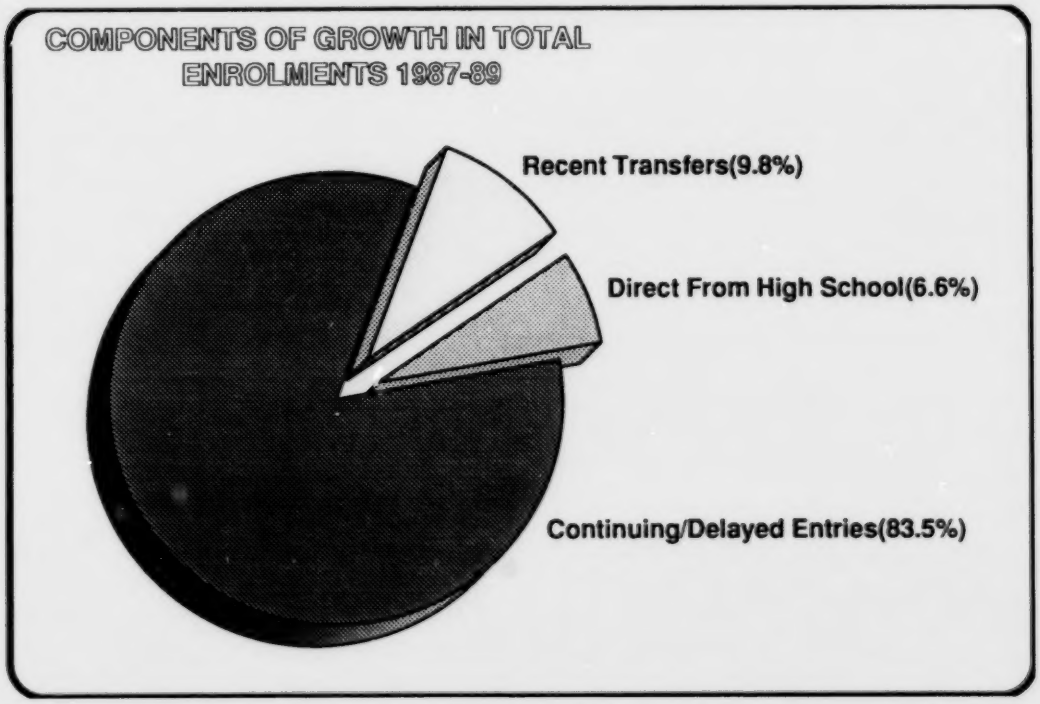
2. Are post-secondary enrolments generally increasing?

- Over 100,000 students enrolled in the post-secondary system in the Fall of 1989.
- Total enrolments from all sources (including transfers and delayed as well as immediate entries) have been steadily increasing in recent years.
- College/institute enrolments have increased 14%, and university 12%, since 1987.
- Colleges and technical institutes are encompassing an increasingly large share of all post-secondary enrolments.



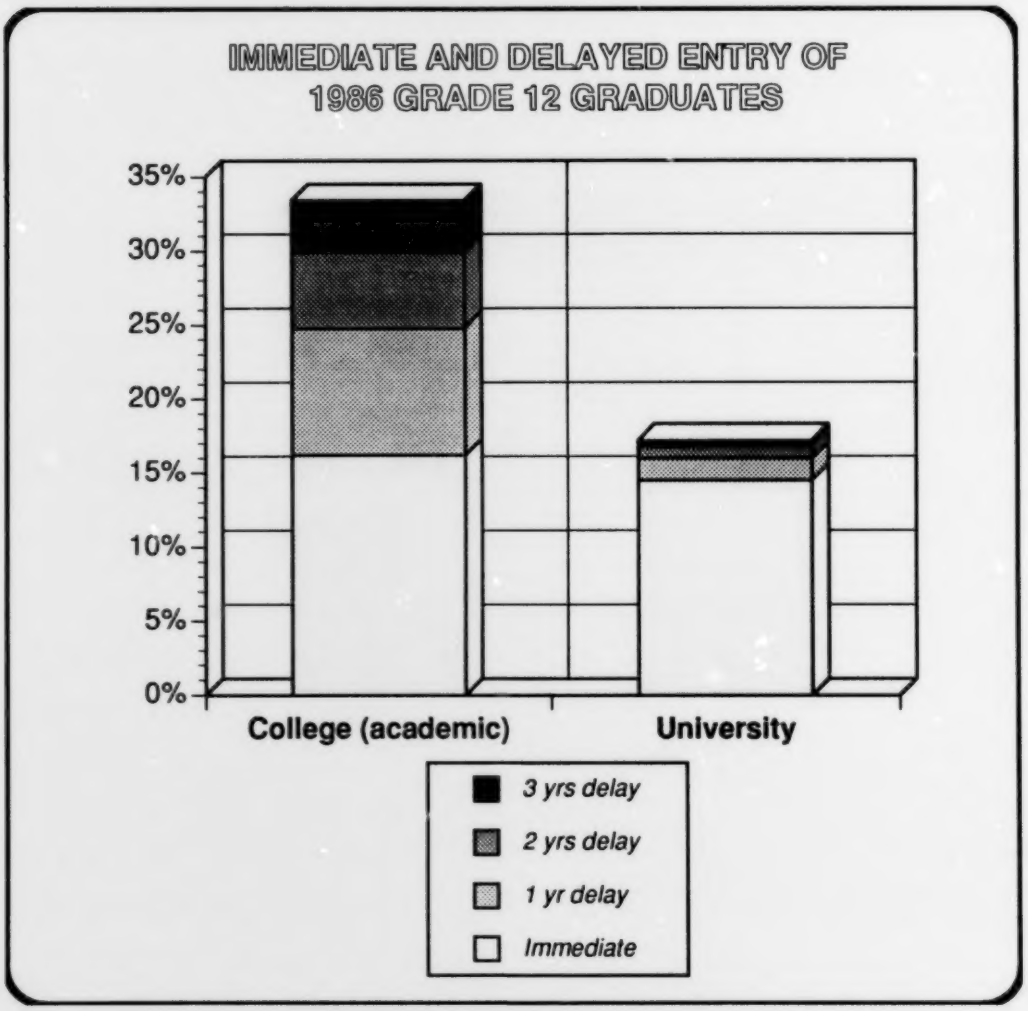
3. What factors are affecting these trends?

- By itself the trend towards higher transition rates directly from secondary school is not nearly large enough to account for the observed increase in total post-secondary participation. Of the increase of 14,460 enrolments from 1987 to 1989, the direct entries from high school account for only 7%; the contribution of continuing students and delayed entries is much larger.



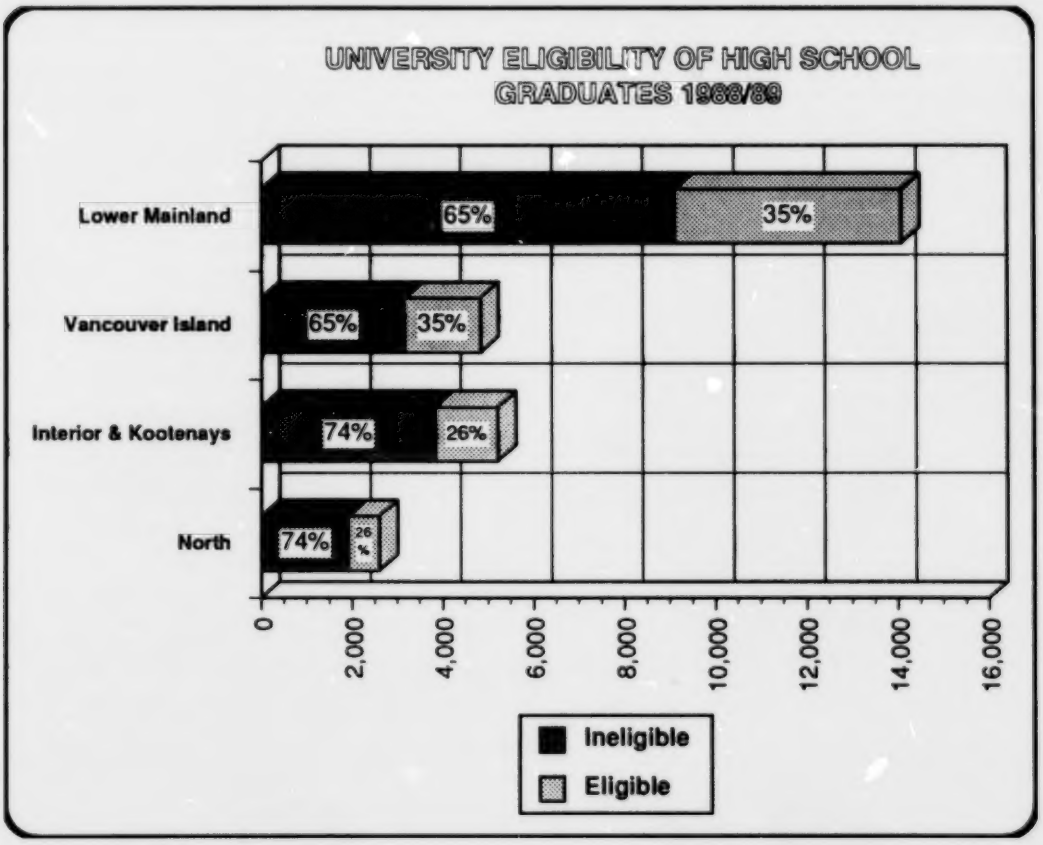
- The bulk of the increase in enrolments is the result of several factors signifying a change from the traditional post-secondary student flow patterns.
  - University students are less likely to drop out. **Persistence rates** are up about 10% from the early 1980's. At the University of Victoria, for instance, the proportion of direct high-school entries still enrolled after two years rose from 49% in 1982 to 58% in 1989.
  - **Multiple enrolments:** Students appear to be more selective in the courses and type of instruction they seek. Since 1987 the number of students enrolled in multiple colleges and/or universities increased by 32%.
  - The **capacity** of the post-secondary system has risen to meet an increasing demand for seats.

- **Delayed entries** to colleges: More students enter college after spending some years outside the education system than enter directly from high school. Of those graduating from high school in 1986, 31% enrolled in college academic or university programs immediately; a further 20% had entered the post-secondary system by 1989. *(The volume of delayed entry into career/technical programs is unknown.)*



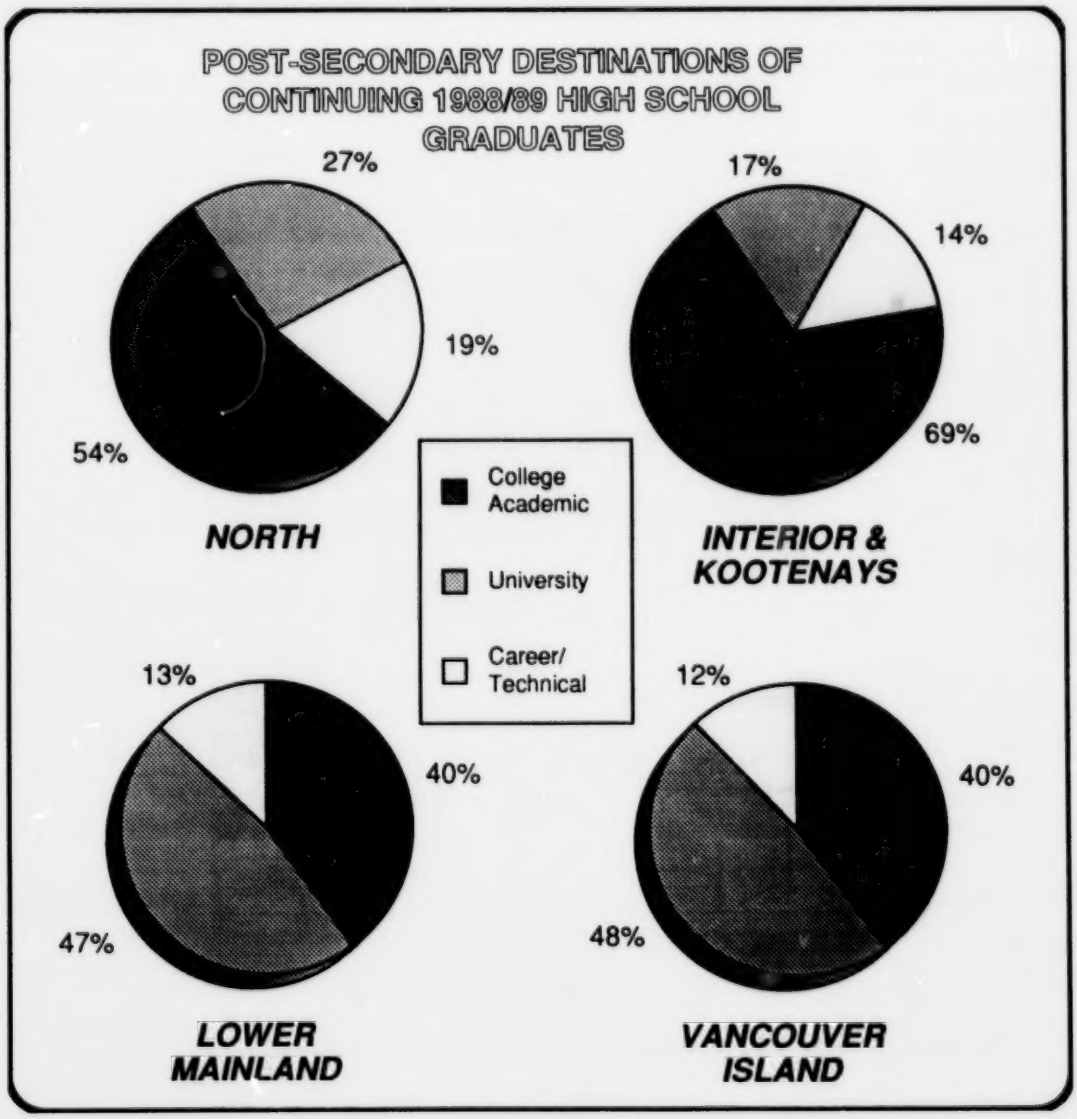
4. **Are there large differences among regions of the province?**

- **University eligibility**: Students from urban areas are more likely to graduate from secondary school with the courses and marks required by universities. The highest eligibility rates are found in the North Shore (50%) and Vancouver (44%) areas.



- Post-secondary **transition rates** are also highest in the Lower Mainland and lowest in the North.

- The **type of education** students enter after high school varies significantly by region.
  - Students from Vancouver Island and the Lower Mainland are most likely to go to university.
  - Students who enrol in **college** academic programs are more likely to meet **university** eligibility requirements in the North (41%) and in the Interior & Kootenays (43%) than in the Lower Mainland (29%).
  - The Interior has the highest college academic transition rate.
  - The North contributes the highest proportion of career/technical students.

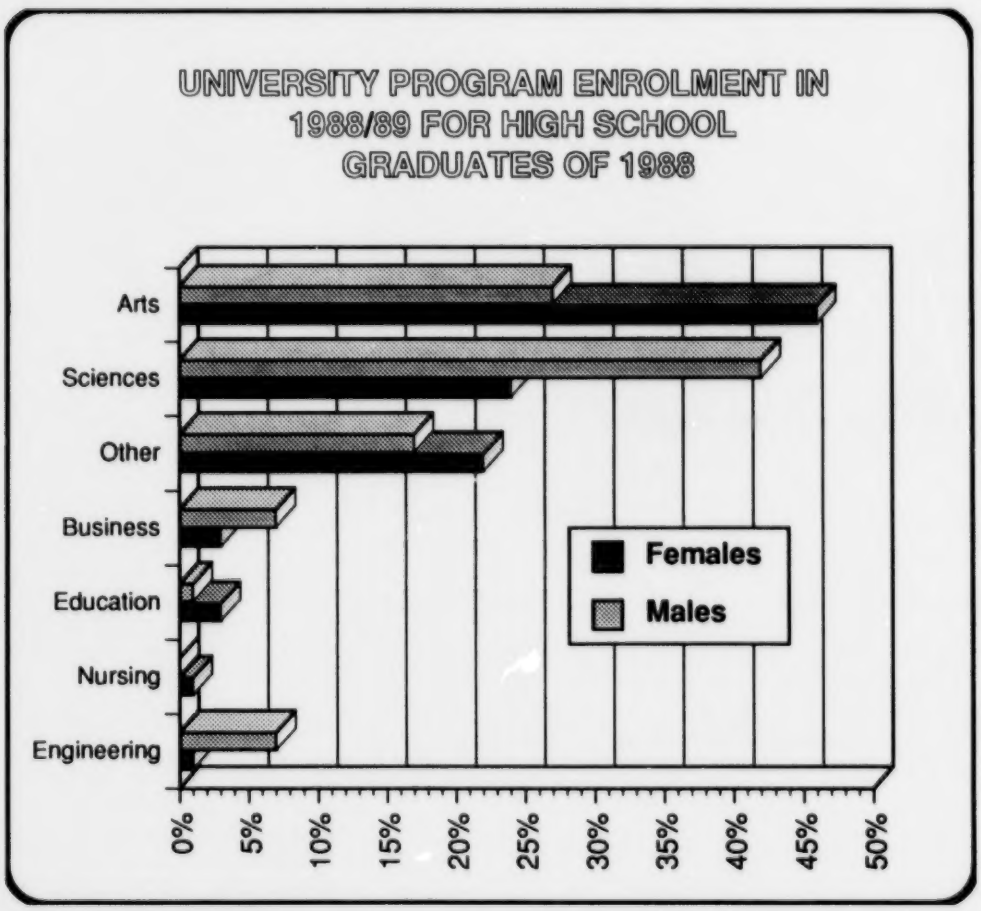


5. **Are female high school graduates more likely than males to enter the post-secondary education system?**

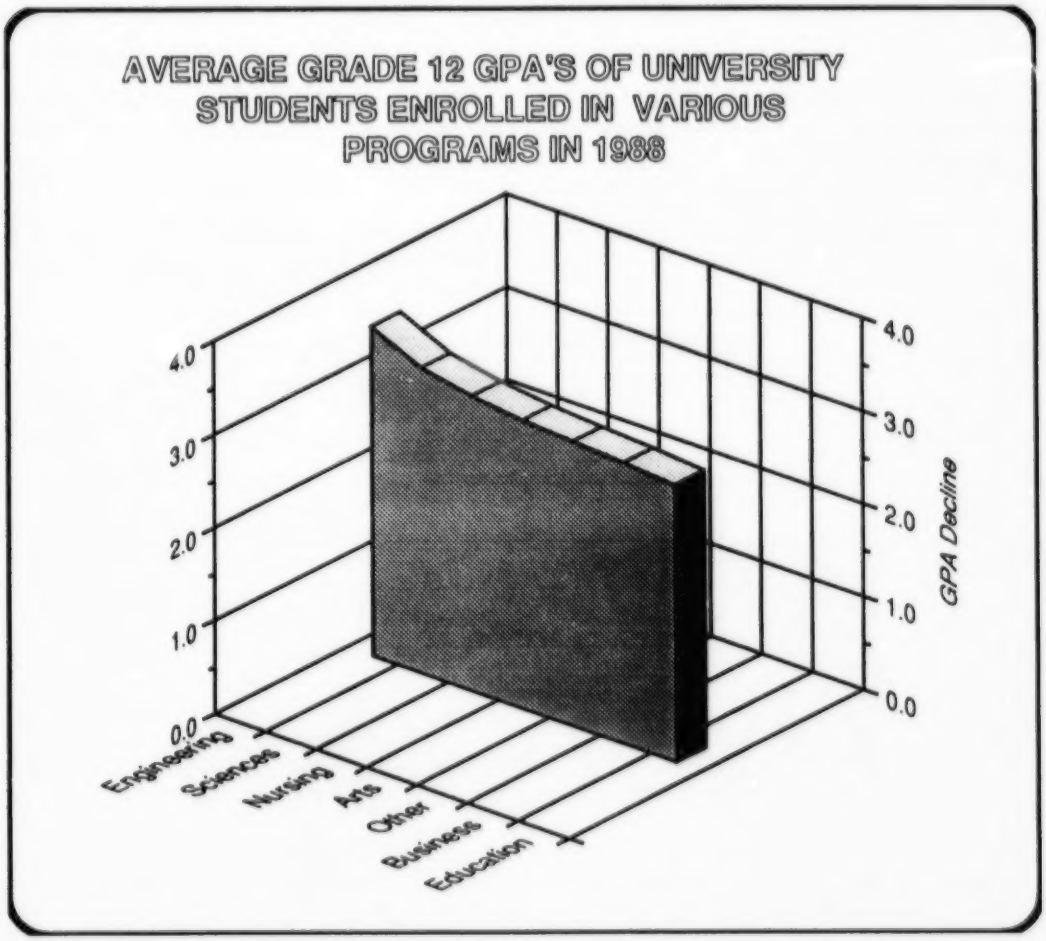
   - **No**. Although the majority of first-year university students are female, this results from the fact that females are more likely to graduate from high school. About three-quarters of females graduate, compared with two-thirds of males. In fact, the likelihood of a female to enter university immediately after graduation is the same as that for males (16%).

6. **How much do gender and high school grades influence the type of programs in which students enrol?**

   - **Gender** apparently has a strong effect on the types of programs in which students initially enrol. Females are clearly more attracted to the Arts and less attracted to the Sciences, Engineering and Business.

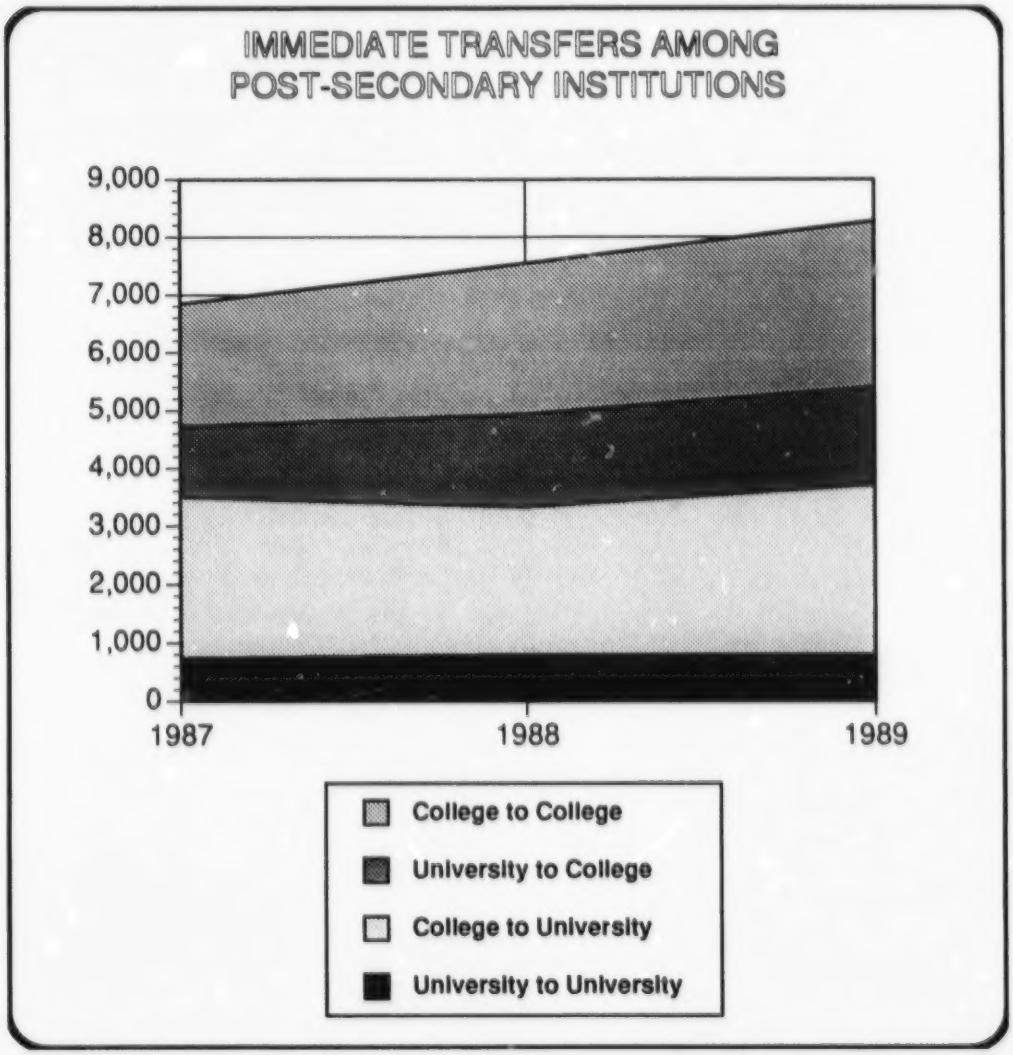


- Students with the highest Grade 12 **marks** are drawn to Engineering and the Sciences, regardless of gender.



Movement Within the Post-Secondary System

1. **How much movement is there among post-secondary institutions?**
   - The most frequent transfers are **from colleges** to universities and other colleges.
   - Only 35% of the students who enter college directly after high school were eligible for university admission. Compared with college entries who were not university-eligible, these students are twice as likely to transfer to university. Nevertheless, a significant volume of students achieve university **eligibility** at college--about 1,200 students take this route to university each year.
   - The net volume of student transfers is increasing steadily, with the largest increases occurring in transfers **to colleges** from universities and other colleges.



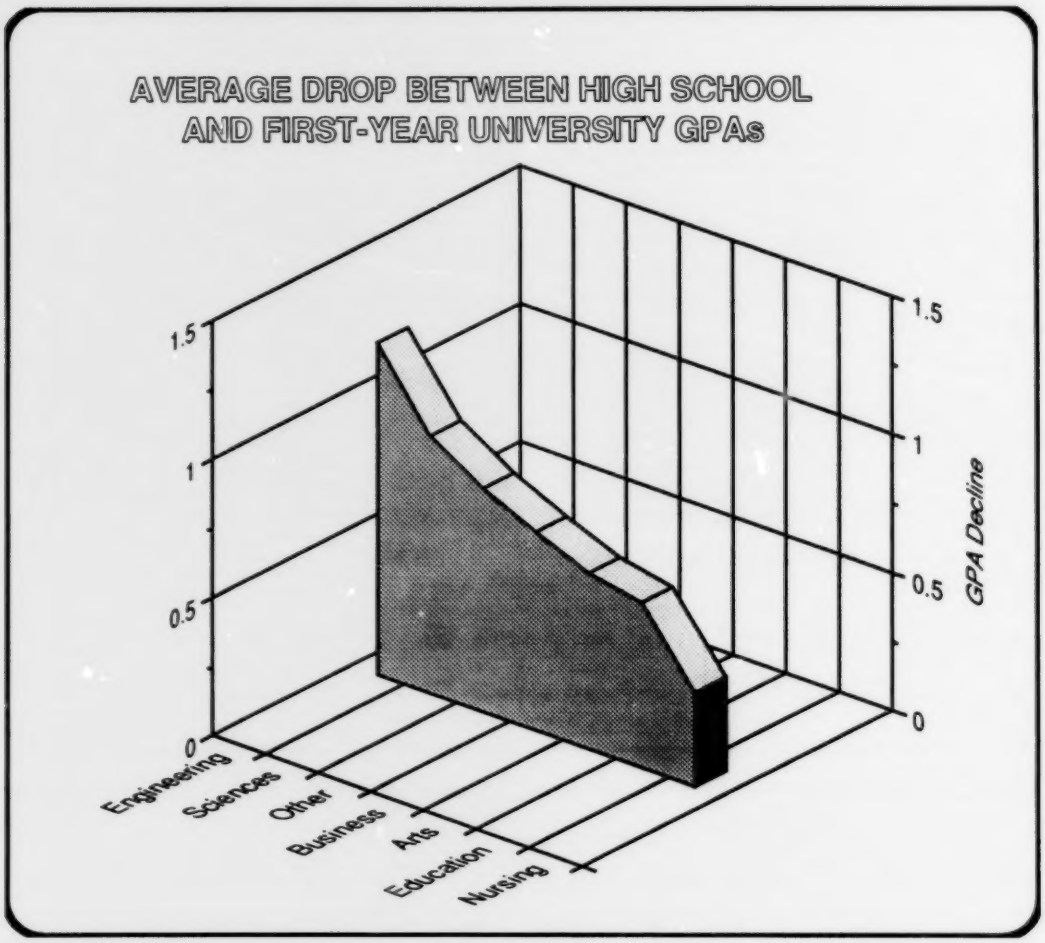
2. **Has the flow of students between the colleges and the universities changed over the past few years?**

- Although college-to-university transfers are still more common, **'reverse transfers'** from university to colleges and institutes are increasing rapidly (up 37% overall from 1987). Areas where reverse transfers have grown the most are:
  - ☛ to two of the colleges which became university colleges in 1989, Cariboo and Okanagan College
  - ☛ to island colleges from UVic
  - ☛ to BCIT from UBC

Tracking Academic Performance Through University

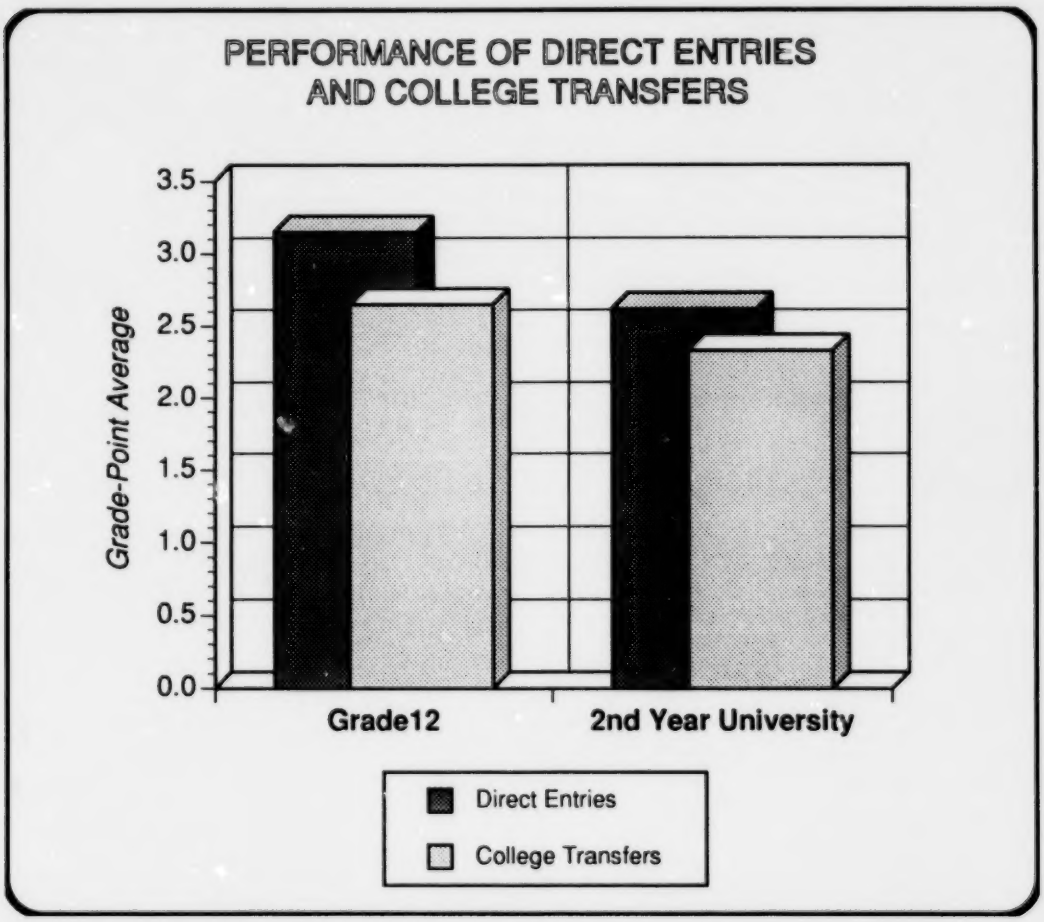
1. **On the whole, are high school grades good predictors of academic success in university?**

   - The relationship between Grade 12 and second-year university performance is statistically reliable, but small in magnitude. Specifically, about 16% of the variance in university grades is predictable from a knowledge of high school grades.
   - The predictability of university GPAs varies among faculties, with Engineering grades being essentially unrelated to high school grades, and the strongest significant relationships occurring in the Science and Applied Science faculties.
   - Using a standard GPA scale, university grades are clearly lower than high school grades. The largest declines in first-year GPAs are found in Engineering and the Sciences, and the lowest in Education, regardless of gender.



2. **How do students who transfer to university from a college perform in comparison to direct entries from secondary school?**

   - College transfers are less likely to enter science-related **faculties** in university.
   - Although college transfers do have lower **GPAs** in second-year university than students who enter university directly from high school (2.33 vs. 2.62), their high school GPAs were also lower (2.65 vs. 3.15). There is no evidence that transferring from a college adversely affects university performance. Indeed, the gap between direct entries and transfers narrows in third-year university studies.



   - **Degree completion** and **persistence rates** are about the same as for direct secondary school entries.

3. **How many students complete their university degrees?**

- About one third of all students who begin college academic programs and university complete a first degree.
- About one half of all students who enter university without having first attended a college complete a first degree.
- Degree completion rates are rising.

4. **Are there trends in the types of degrees universities are awarding?**

- **UBC** is awarding relatively fewer Education and Forestry degrees, but more degrees in Arts & Sciences.
- Science and Engineering degrees account for an increasing share of all degrees at **SFU**.

APPENDIX 1: Project Background

Purpose

The LINK File was created in 1987 as an information partnership aimed at fostering planning in the education system and research on:

- the flow of students into and within the post-secondary education system
- the relationship between academic performance at the secondary and post-secondary levels

File Contents

The File is an amalgamation of student information provided by the Ministry of Education and British Columbia's public universities, colleges and institutes.

The database is constructed from a computerized merging of student records from 1986 through 1989:

- individual student enrolment data spanning Grade 12 and all public post-secondary institutions
- individual academic achievement data for Grade 12 and university students through to degree completion

The database does **not** contain information on:

- post-secondary enrolments of B.C. students outside the province
- academic achievement at the college or technical institute levels
- Adult Basic Education
- vocational training
- college preparatory programs

Considering its multiple data sources and the complexity of the record linking process, the overall accuracy of the LINK File is believed to be in the 90% to 95% range.

Management

The File is maintained by the *B.C. Research Corporation* under the direction of the Ministry of Advanced Education, Training & Technology and the Ministry of Education. In addition to analyzing data and producing reports on approved studies, the *Corporation* serves as secretariat to the Project.

Confidentiality of individual student records and access to the File for research purposes are regulated by the LINK File Management Committee composed of representatives from:

- the Ministry of Advanced Education, Training & Technology
- the Ministry of Education
- the B.C. School Superintendents Association
- the B.C. Principals and Vice-Principals Association

and a number of:

- Registrars of colleges and universities
- Institutional Research Directors of colleges and universities

Future of the LINK Project

Assuming continued funding, the File may undergo a number of enhancements in 1991:

- inclusion of transcript data from colleges and technical institutes
- inclusion of university professional schools, Adult Basic Education, apprenticeship and vocational enrolments (including English as a Second Language)
- conversion of the File to a more flexible, usable database structure
- developments to enable fiscal-year as well as headcount reconciliations of File contents

APPENDIX 2: Available 1990 B.C. Research Reports

Validation of the Link File Data

- A comprehensive investigation of the completeness and accuracy of the File.

Student Flow Into & Within the B.C. Post-Secondary System (1986-1988)

- Describes transfers and enrolment patterns in terms of school district and college catchment areas.

University Articulation & Degree Completion (1986-1989)

- Prepared for the *B.C. Council on Admissions and Transfer*, this report deals with the supply of university undergraduates, academic performance in university, and degree completion rates.

University-High School Liaison

- Produced for the Ministry of Education, this report concerns enrolment and performance of Grade 12 graduates in first-year university. Due to confidentiality considerations, this report is not generally available; the data are being distributed by the Ministry to schools and school districts.